



## Complete Summary

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### TITLE

Nursing facility post-acute care: percent of short-stay residents with delirium.

### SOURCE(S)

Abt Associates, Inc, U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. National nursing home quality measures. User's manual. Cambridge (MA): Abt Associates, Inc.; 2004 Jan 1 (v1). 46 p.

## Brief Abstract

### DESCRIPTION

This measure assesses the percentage of short-stay residents with delirium.

### RATIONALE

Delirium is not a normal part of aging. It should not be confused with dementia. Delirium is a serious condition requiring urgent medical attention. Left untreated the death rate is high. Finding and treating the cause of delirium can ensure proper treatment of a physical or mental problem, and help restore the resident's health and quality of life.

This measure is one of fourteen National Nursing Home Quality Improvement (NHQI) measures. These measures provide information to help consumers make informed decisions about their nursing home care. The measures are also intended to motivate nursing homes to improve their care and to inform discussions about quality between consumers and clinicians.

### PRIMARY CLINICAL COMPONENT

Post-acute care; delirium

### DENOMINATOR DESCRIPTION

All patients with a valid skilled nursing facility prospective payment system (SNF PPS) 14-day assessment (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

### NUMERATOR DESCRIPTION

Number of short-stay residents from the denominator showing at least one symptom of delirium that represents a departure from usual functioning

## Evidence Supporting the Measure

### PRIMARY MEASURE DOMAIN

Outcome

### SECONDARY MEASURE DOMAIN

Not applicable

### EVIDENCE SUPPORTING THE MEASURE

A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences

## Evidence Supporting Need for the Measure

### NEED FOR THE MEASURE

Use of this measure to improve performance

### EVIDENCE SUPPORTING NEED FOR THE MEASURE

Nursing home compare. [internet]. Baltimore (MD): Centers for Medicare and Medicaid Services; 2000- [updated 2004 Feb 19]; [cited 2004 Jul 21].

## State of Use of the Measure

### STATE OF USE

Current routine use

### CURRENT USE

Internal quality improvement  
National health care quality reporting

## Application of Measure in its Current Use

### CARE SETTING

Nursing Homes

### PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Measure is not provider specific

### LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Single Health Care Delivery Organizations

#### TARGET POPULATION AGE

Patients of all ages

#### TARGET POPULATION GENDER

Either male or female

#### STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

### Characteristics of the Primary Clinical Component

#### INCIDENCE/PREVALENCE

About 3 million elderly and disabled Americans received care in our nation's nearly 17,000 Medicare and Medicaid-certified nursing homes in 2001. Slightly more than half of these were long-term nursing home residents, but nearly as many had shorter stays for rehabilitation care after an acute hospitalization. About 75 percent were age 75 or older.

#### EVIDENCE FOR INCIDENCE/PREVALENCE

Nursing home quality initiative. Overview. Baltimore (MD): U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services (CMS); 2004 Jan 20. 3 p.

#### ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

#### BURDEN OF ILLNESS

See "Rationale" field.

#### UTILIZATION

Unspecified

#### COSTS

Unspecified

### Institute of Medicine National Healthcare Quality Report Categories

#### IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness

#### Data Collection for the Measure

#### CASE FINDING

Users of care only

#### DESCRIPTION OF CASE FINDING

All patients with a valid skilled nursing facility prospective payment system (SNF PPS) 14-day assessment

#### DENOMINATOR SAMPLING FRAME

Patients associated with provider

#### DENOMINATOR (INDEX) EVENT

Diagnostic Evaluation  
Institutionalization

#### DENOMINATOR INCLUSIONS/EXCLUSIONS

##### Inclusions

All patients with a valid skilled nursing facility prospective payment system (SNF PPS) 14-day assessment

##### Exclusions

Patients satisfying any of the following conditions:

1. Patients who are comatose or comatose status unknown on the SNF PPS 14-day assessment.
2. Patients with end-stage disease or unknown on the SNF PPS 14-day assessment.
3. Patients who are receiving hospice care or hospice status is unknown on the SNF PPS 14-day assessment.
4. The quality measure (QM) did not trigger (patient not included in the numerator) and there is a missing value on any of the specified items on the SNF PPS 14-day assessment.

Refer to the original measure documentation for details.

#### NUMERATOR INCLUSIONS/EXCLUSIONS

#### Inclusions

Number of short-stay residents from the denominator showing at least one symptom of delirium that represents a departure from usual functioning

Refer to the original measure documentation for details.

#### Exclusions

Unspecified

#### DENOMINATOR TIME WINDOW

Time window precedes index event

#### NUMERATOR TIME WINDOW

Encounter or point in time

#### DATA SOURCE

Special or unique data

#### LEVEL OF DETERMINATION OF QUALITY

Not Individual Case

#### OUTCOME TYPE

Clinical Outcome

#### PRE-EXISTING INSTRUMENT USED

CMS Minimum Data Set - Resident Assessment Instrument (Version 2.0)

### Computation of the Measure

#### SCORING

Rate

#### INTERPRETATION OF SCORE

Better quality is associated with a lower score

#### ALLOWANCE FOR PATIENT FACTORS

Risk adjustment devised specifically for this measure/condition

#### DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

Risk adjustment refines raw quality measure (QM) scores to better reflect the prevalence of problems that facilities should be able to address. Two complementary approaches to risk adjustment were applied to the National Quality Forum (NQF)-recommended QMs.

One approach involves exclusion of residents whose outcomes are not under nursing facility control (e.g., outcome is evidenced on admission to the facility) or the outcome may be unavoidable (e.g., the resident has end-stage disease or is comatose). For each quality measure (QM), the prevalence of the outcome across all residents in a nursing facility, after exclusions, is the facility-level observed QM score.

A second approach involves adjusting QM scores directly, using logistic regression. This method of adjustment employs resident-level covariates that have been found to increase the risks of an outcome.

- First, resident-level covariates were used in a logistic regression model to calculate a resident-level expected QM score (the probability that the resident will evidence the outcome, given the presence or absence of characteristics measured by the covariates).
- Then, an average of all resident-level expected QM scores for the nursing facility was calculated to create a facility-level expected QM score.

The final facility-level adjusted QM score was based on a calculation which combines the facility-level expected score and the facility-level observed score.

Refer to the original measure documentation for details.

## STANDARD OF COMPARISON

External comparison at a point in time  
Internal time comparison

## Evaluation of Measure Properties

### EXTENT OF MEASURE TESTING

The quality measures have been validated and are based on the best research currently available. These quality measures meet four criteria. They are important to consumers, are accurate (reliable, valid and risk adjusted), can be used to show ways in which facilities are different from one another, and can be influenced by the provision of high quality care by nursing home staff. A formal validation study was conducted involving 5,758 chronic and post-acute residents in 209 nursing facilities in 6 states.

### EVIDENCE FOR RELIABILITY/VALIDITY TESTING

Abt Associates, Inc, U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services. Validation of long-term and post-acute care quality indicators. Cambridge (MA): Abt Associates, Inc.; 2003 Jun 10. 93 p.

## Identifying Information

### ORIGINAL TITLE

Percent of short-stay residents with delirium.

### MEASURE COLLECTION

[Nursing Home Quality Initiative: National Nursing Home Quality Measures](#)

### MEASURE SET NAME

[Post Acute Care Quality Measures](#)

### DEVELOPER

Centers for Medicare and Medicaid Services

### ENDORSER

National Quality Forum

### ADAPTATION

Measure was not adapted from another source.

### RELEASE DATE

2004 Jan

### MEASURE STATUS

This is the current release of the measure.

### SOURCE(S)

Abt Associates, Inc, U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services. National nursing home quality measures. User's manual. Cambridge (MA): Abt Associates, Inc.; 2004 Jan 1 (v1). 46 p.

### MEASURE AVAILABILITY

The individual measure, "Percent of short-stay residents with delirium," is published in "National Nursing Home Quality Measures. User's Manual." This document is available in Portable Document Format (PDF) from the [Centers for Medicare and Medicaid Services \(CMS\) Web site](#).

For more information, refer to the CMS Web site at, [www.cms.hhs.gov](http://www.cms.hhs.gov).

## COMPANION DOCUMENTS

The following is available:

- Nursing Home Compare. [internet]. Baltimore (MD): Centers for Medicare and Medicaid Services. 2000- [updated 2004 Feb 19]; [cited 2004 Jul 21]. This tool is available from the [Medicare Web site](#).

## NQMC STATUS

The NQMC summary was completed by ECRI on July 22, 2004. The information was verified by the measure developer on August 30, 2004.

## COPYRIGHT STATEMENT

No copyright restrictions apply.

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The logo for FIRSTGOV, with "FIRST" in blue and "GOV" in red, and a small red star above the "I".

